

## INDEX

### ACROLEIN

ciliotoxic agent, 193

### ACS See AMERICAN CANCER SOCIETY

### ADOLESCENTS

age and sex factors in spontaneous smoking cessation, 291

predictors of spontaneous smoking cessation, 291-296

prospective attitudinal predictors of smoking cessation, 291, 292

smoking prevention programs, 296-300

social influences on smoking cessation, 292-296

spontaneous smoking cessation rates, 289-291, 300

### ADVISORY COMMITTEE TO THE SURGEON GENERAL (1964)

definition of "cause", 16

epidemiologic criteria for causality, 4

lung cancer and smoking association, 15

### AGE FACTORS

age-adjusted death rates defined, 147

bladder cancer—age-specific mortality, 102, 104-107

bronchial, tracheal, and lung cancers—age-specific mortality, 25-28

buccal cavity plus oral pharynx cancer—age-specific mortality, 80-84

cervical cancer—age-specific mortality, 137, 139

esophageal cancer—age-specific mortality, 90, 92-95

kidney cancer—age-specific mortality, 113, 115-118

laryngeal cancer—age-specific mortality, 65-67

### AGE FACTORS—Contd.

lung cancer—age-specific mortality and smoking patterns, 50-58, 145

pancreatic cancer—age-specific mortality, 122, 124-127

responsiveness of animals to known carcinogens, 176, 177

smoking initiation age and cessation probability for adolescents, 293

spontaneous smoking cessation by adolescents, 291

stomach cancer—age-specific mortality, 132, 134, 135

### AGRICULTURAL CHEMICALS

carcinogen precursor, 202

tumor promoters, 197

### AIR POLLUTION

lung cancer mortality relationship, 46, 47

### ALCOHOL CONSUMPTION

dimethylnitrosamine metabolism enhancement, 202

esophageal cancer—synergistic role with smoking, 7, 100, 101, 146

influence on N'-nitrosornicotine carcinogenicity, 205

laryngeal cancer—synergistic effect with smoking, 6, 72, 75, 77, 78, 146

oral cancer—synergistic role with smoking, 7, 80, 86, 88, 90, 146

smoking cessation relationship, 267

synergistic effects with smoking relative to cancer risks, 191, 192

### ALKALOIDS

tobacco content, 203

### AMERICAN CANCER SOCIETY (ACS)

"I Quit Kit" effectiveness, 258, 259

lung cancer mortality and morbidity estimates for 1982, 21

**ACS—Contd.**

lung cancer mortality for nonsmoking wives of smokers, 248-250  
the Great American Smokeout, 262

**AMERICAN CANCER SOCIETY 9-STATE STUDY**

bladder cancer mortality ratio, 110  
esophageal cancer mortality ratio, 96  
esophageal cancer mortality ratio in cigar and pipe smokers, 99  
kidney cancer mortality ratio and relative risk, 120, 121  
laryngeal cancer mortality ratio, 68  
laryngeal cancer mortality ratio in cigar and pipe smokers, 75  
lung cancer mortality ratio, 36, 38  
oral cancer mortality ratio, 85, 86  
oral cancer mortality ratio in cigar and pipe smokers, 88  
overall cancer mortality ratio, 142, 143  
pancreatic cancer mortality ratio, 130  
stomach cancer mortality ratio, 136  
summary, 32, 33

**AMERICAN CANCER SOCIETY 25-STATE STUDY**

air pollution effect on lung cancer, 46, 47  
bladder cancer mortality ratio, 110  
bladder cancer risk and lower tar and nicotine cigarettes, 108  
esophageal cancer mortality ratio, 96  
esophageal cancer mortality ratio in cigar and pipe smokers, 99  
female smokers and esophageal cancer, 96  
kidney cancer mortality ratio and relative risk, 120  
laryngeal cancer mortality ratio, 68, 72  
laryngeal cancer mortality ratio in cigar and pipe smokers, 75  
laryngeal cancer risk and lower tar and nicotine cigarettes, 69  
lung cancer mortality among males vs. females, 55  
lung cancer mortality ratio in ex-smokers, 46  
lung cancer mortality ratio in male smokers, 61

**AMERICAN CANCER SOCIETY**

**25-STATE STUDY—Contd.**

lung cancer mortality ratio, smokers vs. nonsmokers, 36, 38, 39  
mortality ratios for smoking-related cancers among females and males, 148  
occupational exposure and lung cancer, 47  
oral cancer mortality ratio, 85  
oral cancer mortality ratio in cigar and pipe smokers, 88  
oral cancer risk and lower tar and nicotine cigarettes, 80, 83  
overall cancer mortality ratio, 142  
pancreatic cancer mortality ratio, 130  
stomach cancer mortality ratio, 136  
summary, 31, 33

**AMERICAN HEALTH FOUNDATION STUDY**

esophageal cancer mortality risk in male ex-smokers, 97, 98  
oral cancer risk in ex-smokers, 87

**AMMONIA**

ciliotoxic agent, 193

**ANGINA PECTORIS**

involuntary smoking effect on patients' exercise tolerance, 239

**ANIMAL MODELS**

(See also **DOGS; RODENTS; SYRIAN GOLDEN HAMSTERS**)  
carcinogenicity testing factors, 175-178  
inhalation studies, 184-186, 220  
involuntary smoking effects, 241  
laryngeal cancer research, 75, 77  
lung carcinomas in rats following arsenic exposure, 212  
metabolism of nitrosamines in rats and Syrian golden hamsters, 205, 206  
nickel compounds and carcinoma development, 211  
oral cancer research, 89  
polonium-210 effects, 210  
**ANTISMOKING MATERIAL**  
smoking prevention films for adolescents, 296, 297  
**AROMATIC AMINES**  
cigarette smoke content and their carcinogenic activity, 207-209  
guinea pigs nonsuitability for testing, 175

## INDEX

### AROMATIC HYDROCARBONS

tumor initiators, 195

### AROMATIC NITROHYDROCARBONS

cigarette smoke content and their carcinogenic activity, 207-209

### ARSENIC

tobacco content and carcinogenic activity, 211, 212

### ASBESTOS

syncarcinogenic effects with smoking, 189, 190

### ASBESTOS WORKERS

lung cancer mortality, smokers vs. nonsmokers, 189, 190

### AVERSIVE THERAPY

focused smoking and smoking cessation maintenance relationship, 273

intensive smoking effectiveness, 10  
reciprocal aversion among spouses, effectiveness, 279, 280

### BEHAVIOR

smoking cessation relapse relationship, 276-279

### BENZO[A]PYRENES

animal responsiveness to skin painting, 175

esophageal cancer-experimental studies, 101

metabolic activation, 195, 196

oral cancer-experimental studies, 89

syncarcinogenic effect with polonium-210, 191, 210

### BLADDER CANCER

aromatic amines presence in cigarette smoke relationship, 207, 208

carcinogens and cocarcinogens in urine of smokers, 219

causal significance of the association with smoking-coherence, 111, 112

causal significance of the association with smoking-consistency, strength, and specificity, 106-110

causal significance of the association with smoking-temporal relationship, 110

cigarette smoking a contributory factor, 7, 102, 146

dose-response relationship with smoking, 107, 108, 111, 112

### BLADDER CANCER—Contd.

histologic types, 102

hypothesis on mechanisms involved in pathogenesis, 199, 200

morbidity and mortality estimates for 1982, 101

mortality in populations with different smoking habits, 48, 50

mortality rates, 102-112

occupational exposure risks, 102, 112

pipe and cigar smoking relationship, 112

prevalence in populations with different smoking habits, 112

prospective epidemiological studies of relationship with smoking, 108, 110, 111

retrospective studies of relationship with smoking, 106-109

risks among ex-smokers, 108, 110, 111, 112

sex factor and smoking habits relationship, 108, 112

survival rate, 102

### BRITISH PHYSICIANS STUDY

bladder cancer mortality for pipe and cigar smokers, 112

bladder cancer mortality ratio, 110, 111

esophageal cancer mortality ratio, 96, 97

esophageal cancer mortality ratio for ex-smokers, 97

esophageal cancer mortality ratio in cigar and pipe smokers, 99

kidney cancer mortality ratio and relative risk, 120, 121

laryngeal cancer mortality ratio, 68, 72

laryngeal cancer mortality ratio in cigar and pipe smokers, 75

laryngeal cancer risks among ex-smokers, 72, 73

lung cancer mortality ratio in ex-smokers, 46

lung cancer mortality ratio in male smokers, 61

lung cancer mortality ratio, smokers vs. nonsmokers, 36, 38, 39

oral cancer mortality ratio, 85, 86

oral cancer mortality ratio in cigar and pipe smokers, 88

**BRITISH PHYSICIANS**

**STUDY—Contd.**

- pancreatic cancer mortality ratio, 130
- stomach cancer mortality ratio, 136
- summary, 31, 33

**Bronchial cancer See LUNG CANCER**

**BRONCHIAL EPITHELIUM**

- premalignant changes among cigar and pipe smokers, 62
- premalignant changes and cigarette smoking relationship, 42, 55, 58–60

**BRONCHITIS**

- incidence in children of smoking parents, 239

**CADMIUM**

- carcinogenic activity, 212
- kidney cancer relationship, 119

**CALIFORNIA OCCUPATIONS STUDY**

- bladder cancer mortality ratio, 110, 111
- esophageal cancer mortality ratio, 96, 97
- kidney cancer mortality ratio and relative risk, 120, 121
- laryngeal cancer mortality ratio, 68
- lung cancer mortality ratio, smokers vs. nonsmokers, 36, 38
- oral cancer mortality ratio, 85, 86
- pancreatic cancer mortality ratio, 130
- stomach cancer mortality ratio, 136
- summary, 32, 33

**CANADIAN VETERANS STUDY**

(*See also* **DEPARTMENT OF HEALTH AND WELFARE OF CANADA**)

- bladder cancer mortality ratio, 110
- lung cancer mortality ratio in male smokers, 61
- lung cancer mortality ratio, 36, 38
- pancreatic cancer mortality ratio, 130
- summary, 32, 33

**CANCER**

(*See also* **BLADDER CANCER; CERVICAL CANCER; ESOPHAGEAL CANCER; KIDNEY CANCER; LARYNGEAL CANCER; LUNG CANCER; NASAL CANCER; ORAL**

**CANCER—Contd.**

**CANCER; PANCREATIC CANCER; PROSTATIC CANCER; RENAL CANCERS; SKIN CANCER; STOMACH CANCER; TRACHEAL CANCER)**

- deaths caused by tobacco, 1978, 149
- historical perspective, 3–4
- mortality for smoking-related cancers among females, 148
- overall mortality and smoking relationship, 4, 5, 15, 22, 142–144, 147

**CARBAZOLES**

- cocarcinogen role, 198

**CARBON MONOXIDE**

- absorption by nonsmokers, 240
- content in cigarette smoke, 215–217
- content in cigarettes, cigars, and little cigars, 192, 193
- toxic effect, 192

**CARCINOGENESIS**

- alcohol consumption influence, 192
- animal studies factors, 175–178
- criteria and guidelines for carcinogenicity tests, 173–178
- dermal administration factors, 174
- inhalation administration factors, 174, 175
- intraperitoneal and intravenous injections, 174
- mechanisms related to tobacco, 8, 9
- oral administration factors, 173, 174
- physico-chemical characterization of the material requirement, 173
- planning and conduct of carcinogenicity experiments, 178
- research needs and priorities, 218–220
- subcutaneous and intramuscular implantation, 174
- synergistic effect of occupational exposure and smoking, 189, 190
- tobacco-specific nitrosamines, 205, 206
- transplacental migration of smoke constituents, 188, 219–221

**CARCINOGENS**

- aromatic amines and aromatic nitrohydrocarbons, 207–209
- cadmium, 212
- inorganic arsenic compounds, 212

## INDEX

### CARCINOGENS—Contd.

- N-nitrosomorpholine in animals, 201
- nickel, 210, 211
- nitrosodiethanolamine, 202
- organ-specific carcinogens in cigarette smoke, 199–213, 220
- polonium-210, 210

### CARDIOVASCULAR DISEASE

(See also ISCHEMIC HEART DISEASE)

- MRFIT intervention program, 280, 281

### CATECHOL

- cocarcinogen role, 198

### CERVICAL CANCER

- cigarette smoking relationship, 8
- contributing factors, 137, 138
- dose-response relationship with smoking, 140, 141
- mortality, 137–141
- nonsmoking wives of smokers, risk, 244
- retrospective and prospective studies of relationship with smoking, 140, 141
- squamous cell carcinoma, 137
- survival rate, 137

### CESSATION OF SMOKING

- age and sex factors in spontaneous cessation by adolescents, 291
- antecedents of relapse, 10, 276–279, 285
- bladder cancer risk reduction, 108, 110–112
- cessation clinics improvement recommendations, 283, 284
- esophageal cancer mortality and risk reduction, 97, 98, 101
- kidney cancer mortality effect, 119
- laryngeal cancer mortality and risk effect, 6, 72, 73, 78, 145
- lung cancer mortality effect, 5, 6, 45, 46, 63, 146
- maintenance procedures, 10, 271–281, 285
- manuals comparison, 258–260
- minimal intervention approaches, 10, 260–266
- most effective strategy, 293, 300
- oral cancer risk reduction, 7, 87, 90
- predictors of outcome, 264–268, 281–283

### CESSATION OF SMOKING—Contd.

- predictors of spontaneous cessation in adolescence, 10, 291–296
- preferred approach by adults, 9, 10, 257, 268
- prospective attitudinal predictors in adolescents, 291, 292
- reinforcement of maintenance techniques, 10, 271–273, 285
- repeated cessation attempts in adolescents and success probability, 11, 293–295, 300
- self-help approaches review, 10, 258–260, 267, 268
- “self-help” defined, 258
- self-management techniques for maintenance, 10, 273, 285
- social influences on adolescents, 10, 292–296
- social support in maintaining abstinence, 279–281, 285
- spontaneous cessation rates in adolescence, 10, 289–291, 300
- tailoring treatments to individual characteristics relationship to maintenance, 274–276
- therapist contact relationship to maintenance, 274

### Chemicals See AGRICULTURAL CHEMICALS

### CHILDREN

- respiratory illness incidence related to parental smoking, 239

### CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS (MORMONS)

- cancer risks compared with non-Mormons, 45, 46
- laryngeal cancer rates, 65, 72
- lung cancer mortality, 48, 50

### CIGAR SMOKE

- carbon monoxide values, 193
- mainstream smoke—pH content, 183, 184
- standardized parameters for collection and analysis, 182
- temperature profile, 182

### CIGAR SMOKING

- bladder cancer relationship, 112
- cancer mortality ratios, 143
- esophageal cancer relative risk and mortality rate, 7, 99–101, 146
- kidney cancer relationship, 122

**CIGAR SMOKING—Contd.**

laryngeal cancer relative risk and mortality rate, 6, 74–77, 145  
lung cancer relative risk and mortality rate, 5, 60–62, 63, 145  
oral cancer relative risk and mortality rate, 6, 7, 87–89, 146  
pancreatic cancer risk, 131  
synergistic role with alcohol for oral cancer risk, 88

**CIGARETTE SMOKE**

analysis, 183, 184, 220  
aromatic amines and aromatic nitrohydrocarbons, 207–209  
arsenic content, 212  
biological activity measurement, 8  
cadmium content, 212  
changes in composition of U.S. manufactured cigarettes, 9, 215, 216  
flavor enhancement, 217–219  
hypotheses on mechanisms involved in pathogenesis of pancreatic, kidney, and bladder cancers, 199, 200  
nickel content, 210, 211  
organ-specific carcinogens, 212, 213  
polonium-210 content, 210  
standardized parameters for collection and analysis, 181, 182  
tobacco-specific N-nitrosamines, 203  
U.S. sales-weighted average tar and nicotine yields, 215

**CIGARETTES**

nickel content, 210, 211  
polonium-210 content, 210  
temperature profiles, 182, 183

**CIGARETTES, LOW YIELD**

bladder cancer risk, 108  
esophageal cancer risk, 96  
laryngeal cancer risk, 6, 69, 78, 146  
lung cancer risk, 6, 37, 42, 63, 145  
oral cancer risk, 80, 83  
smoking compensation, 216, 217, 221

**CIRRHOSIS**

smoking association, 19

**COCARCINOGENS**

definition, 187  
identification in tobacco smoke, 219  
PAH subfractions, 188  
tobacco smoke particulates, 197–199

**COFFEE CONSUMPTION**

smoking cessation relationship, 267

**CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT**

cancer mortality attributable to tobacco use, 142  
lung cancer mortality and smoking association, 23

**DEPARTMENT OF HEALTH AND WELFARE OF CANADA**

criteria and guidelines for carcinogenicity tests, 173

**DIET**

carcinogenicity studies in animals, relationship, 177

**DOGS**

inhalation studies, 185  
nicotine inhibition of pancreatic bicarbonate secretion, 131  
pancreatic proteases change from cigarette smoking in beagles, 132  
syncarcinogenic effect of radon daughters and cigarette smoke in beagles, 190, 191

**ECONOMICS**

lung cancer impact, 6, 23, 63, 145

**EDUCATIONAL FACTORS**

adolescence smoking initiation and cessation effect, 293, 300  
smoking cessation relationship, 267

**EMPHYSEMA**

nonsmoking wives of smokers, risk, 246

**ENVIRONMENTAL PROTECTION AGENCY (EPA)**

criteria and guidelines for carcinogenicity tests, 173

**EPIDEMIOLOGY**

"association" defined, 20  
"causal" defined, 20  
"contributory factor" defined, 20  
criteria for causality, 4, 16–20  
"major cause" defined, 20

**ESOPHAGEAL CANCER**

causal significance of the association with smoking—coherence, 97–99  
causal significance of the association with smoking—consistency, 95, 96  
causal significance of the association with smoking—specificity, 96  
causal significance of the association with smoking—strength, 96

## INDEX

### ESOPHAGEAL CANCER—Contd.

- causal significance of the association with smoking—temporal relationship, 96, 97
- dose-response relationship with smoking, 96-98, 101, 146
- experimental studies, 101
- lower tar and nicotine cigarettes and risk in females, 96
- mortality rates, 90-98
- mortality rates and relative risk for cigar and pipe smokers, 99-101, 146
- mortality risk among ex-smokers, 97, 98, 101
- retrospective and prospective studies findings, 95-97, 99
- smoking as causal factor, 7, 146
- survival rate, 90
- synergy of alcohol and smoking, 100, 101, 146, 191, 202
- zinc deficient diet relationship, 192

### ESOPHAGEAL EPITHELIUM

- nutritional deficiency and susceptibility to smoke, 218, 219

### EX-SMOKERS

- bladder cancer risk, 108, 110-112
- esophageal cancer mortality and relative risk, 97, 98, 101
- kidney cancer mortality, 119
- laryngeal cancer mortality and relative risk, 6, 72, 73, 78, 146
- lung cancer mortality, 5, 6, 45, 46, 63, 146
- oral cancer relative risks, 7, 87, 90
- overall cancer mortality compared to smokers, 5, 143, 144, 147

### FATTY ACIDS

- tumor promoters, 197

### FDA See FOOD AND DRUG ADMINISTRATION

### FEDERAL TRADE COMMISSION (FTC)

- standard cigarette smoking conditions, 181, 182

### FILTERED CIGARETTES

- bladder cancer risk relationship, 108
- laryngeal cancer risk relationship, 69-71, 78, 146
- lung cancer mortality relationship, 37, 40, 41, 63, 145
- oral cancer risk relationship, 83

### FILTERED CIGARETTES—Contd.

- perforation and carbon monoxide reduction, 216
- polonium-210 retention, 210
- temperature profiles of burning cigarettes, relationship, 182
- volatile N-nitrosamines retention by cellulose acetate filter tips, 201

### FOOD AND DRUG ADMINISTRATION (FDA)

- criteria and guidelines for carcinogenicity tests, 173

### FORMALDEHYDE

- induction of carcinomas in rats, 193

### FTC See FEDERAL TRADE COMMISSION

### GAS PHASE COMPONENTS OF SMOKE

- smoke analysis, 183

### Genetics See HEREDITY

### GEOGRAPHICAL FACTORS

- lung cancer mortality in urban vs. rural areas, 45-47
- oral cancer mortality, 78

### GREECE

- lung cancer mortality for nonsmoking wives of smokers, 243-245

### HAWAIIAN STUDY OF FIVE ETHNIC GROUPS

- bladder cancer and smoking association, 108
- laryngeal cancer and smoking association, 65
- lung cancer and smoking association, 34
- oral cancer and tobacco use association, 80
- pancreatic cancer and smoking relationship, 128
- renal cancer and cigarette smoking association, 119
- stomach cancer and smoking association, 136

### HEALTH COUNCIL OF THE NETHERLANDS

- criteria and guidelines for carcinogenicity tests, 173

### HEREDITY

- genetic susceptibilities as potential etiologic factor in kidney cancer, 119

**HEREDITY—Contd.**

Swedish Twin Registry Study related to smoking and lung cancer, 34, 35

**HORMONES**

potential etiologic factor in kidney cancer, 119

**HORN'S REASONS FOR SMOKING SCALE**

self-control cessation techniques relationship, 282, 283

**HYDRAZINE**

metabolic transformation, 194

**HYDROGEN CYANIDE**

ciliatotoxic agent, 193

**IARC See INTERNATIONAL AGENCY FOR RESEARCH ON CANCER**

**ICD See INTERNATIONAL CLASSIFICATION OF DISEASES**

**INDOLES**

cocarcinogen role, 198

**INDUSTRIAL INHALANTS**

carcinogenicity, epidemiological and experimental evidence, 49

**INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC)**

criteria and guidelines for carcinogenicity tests, 173

inorganic arsenic compounds and skin and lung cancer, 212

nickel workers and cancers of the nasal cavity and the lung, 211

nitrosamines as carcinogens in humans, 200, 201

**INTERNATIONAL CLASSIFICATION OF DISEASES (ICD)**

revisions, 147

**INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES, INJURIES, AND CAUSES OF DEATH**

WHO regulation, 147

**INVOLUNTARY SMOKING**

chemical constituents of sidestream smoke, 239-241

dose-response relationship with lung cancer, 241

epidemiologic studies—methodologic difficulties, 24, 243

health effects, 239

**INVOLUNTARY SMOKING—Contd.**

lung cancer mortality for nonsmoking wives of smokers—Greek study, 243-245

lung cancer mortality for nonsmoking wives of smokers—Japanese study, 245-249

lung cancer mortality for nonsmoking wives of smokers—U.S. study, 248-250

lung cancer risk, 9, 250, 251

**ISCHEMIC HEART DISEASE**

nonsmoking wives of smokers, risk, 246

**JAPANESE STUDY**

bladder cancer mortality ratio, 110

cervical cancer mortality ratio, 141

esophageal cancer mortality ratio, 96, 97

kidney cancer mortality ratio and relative risk, 120

laryngeal cancer mortality ratio, 68, 72

lung cancer mortality among nonsmoking wives of smokers, 245-249

lung cancer mortality ratio in ex-smokers, 46

lung cancer mortality ratio in male smokers, 61

lung cancer mortality ratio, smokers vs. nonsmokers, 36, 38

mortality ratios for smoking-related cancers among females, 148

oral cancer mortality ratio, 85, 86

overall cancer mortality ratio, 142, 143

pancreatic cancer mortality ratio, 130

stomach cancer mortality ratio, 136

summary, 31-33

**KAISER PERMANENTE**

subscribers who had or had not quit smoking, 267

**KIDNEY CANCER**

causal significance of association with smoking—coherence, 119-121

causal significance of association with smoking—consistency, strength, and specificity, 118, 119



## INDEX

### KIDNEY CANCER—Contd.

- causal significance of association with smoking—temporal relationship, 119
- chemical elements as potential etiologic factors, 119
- cigarette smoking as contributory factor, 7, 122
- dose-response relationship with smoking, 119, 121
- histological types, 113, 117
- hypotheses on mechanisms involved in pathogenesis, 199, 200
- mortality among ex-smokers, 119
- mortality rates, 113–118
- pipe and cigar smoking relationship, 122
- prevalence in populations with different smoking habits, 121
- prospective studies of relationship with smoking, 119–121
- retrospective studies of relationship with smoking, 118–120
- sex factor and smoking habits relationship, 120, 121
- survival rate, 117

### LARYNGEAL CANCER

- animal studies, 75, 77
- causal significance of association with smoking—coherence, 71–74
- causal significance of association with smoking—consistency, 65–68
- causal significance of association with smoking—specificity, 69, 70
- causal significance of association with smoking—strength, 69
- causal significance of association with smoking—temporal relationship, 70
- cigarette smoking as causal factor, 6, 65, 77, 145
- common cell type and site, 65
- dose-response relationship with smoking, 69, 71, 72, 77, 78, 145
- incidence, 6, 63
- mortality among ex-smokers, 72–74, 78, 146
- mortality rates, 6, 63–65
- mortality ratio and relative risk in cigar, pipe, and cigarette smokers, 6, 74–76, 145

### LARYNGEAL CANCER—Contd.

- prospective studies of mortality among smokers and nonsmokers, 65, 68, 69
- relative risk in smokers vs. nonsmokers, 69
- retrospective studies of smoking relationship, 65, 68
- risk ratios for males and females, 69–71
- sex factor vs. smoking habits and alcohol consumption relationship, 72
- survival rate, 65
- synergy of smoking and alcohol, 72, 75, 77, 78, 146, 191

### LARYNX

- precancerous lesions in smokers, 70, 73, 74

### LEAD

- potential etiologic factor in kidney cancer, 119

### LEAD-210

- cigarette smoker exposure, 210

### LEUKOPLAKIA

- smoking relationship, 87

### LITTLE CIGAR

- carbon monoxide values, 193

### LIVER

- tobacco carcinogen metabolism enhancement by alcohol, 191, 192

### LUNG CANCER

- age-specific smoking patterns and mortality, 50–58, 145
- arsenic exposure association, 212
- causal significance of association with smoking—coherence, 42–59
- causal significance of association with smoking—consistency, 3, 34–36
- causal significance of association with smoking—specificity, 37–39
- causal significance of association with smoking—strength, 35–73
- causal significance of association with smoking—temporal relationship, 39–42
- cigarette consumption/adult in 1950 vs. death rates in mid-1970s, 41, 44
- cigarette smoking as causal factor, 5, 19, 62
- dose-response relationship with smoking, 36–42, 62, 145

**LUNG CANCER—Contd.**

- economic impact, 23, 63, 145
- histological types in smokers and nonsmokers, 27-30
- involuntary smoking risk, 9, 239, 243-251
- latency periods, 243
- mortality among ex-smokers, 45, 46, 63, 145
- mortality for nonsmoking wives of smokers—Greek study, 243-245
- mortality for nonsmoking wives of smokers—Japanese study, 245-249
- mortality for nonsmoking wives of smokers—U.S. study, 248-250
- mortality by site of residence (urban vs. rural), 45-47
- mortality rates, 4, 18, 21-28, 42-48, 50-58, 145, 241
- nickel relationship, 211
- occupation and mortality, 47-49
- polonium-210 as a risk factor, 210
- premalignant changes in bronchial epithelium and smoking relationship, 55, 58-60
- prospective studies of mortality among smokers and nonsmokers, review, 30-33
- risk among pipe and cigar smokers, 60-62, 63, 145
- sex factors vs. smoking habits in relation to mortality, 42-45
- survival rate, 23
- tobacco consumption/capita in 1930 vs. death rates in 1950, 40, 43
- vitamin A level relationship to risk, 218

**MASS MEDIA**

- televised smoking cessation programs, 10, 263-266, 268

**MATERNAL SMOKING**

- transplacental carcinogenesis, 188, 189, 219

**MORBIDITY**

- bladder cancer incidence estimates for 1982, 101
- laryngeal cancer incidence estimates for 1982, 63
- pancreatic cancer incidence estimates for 1982, 122
- stomach cancer incidence estimates for 1982, 132

**Mormons See CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS**

**MORTALITY**

- age-adjusted rates defined, 147
- American Cancer Society Nine-State Study, 32
- American Cancer Society 25-State Study, 31
- bladder cancer, 101-112
- British Physicians Study, 31
- bronchial, tracheal, and lung cancer, 24-28
- California Men in Various Occupations Study, 32
- Canadian Veterans Study, 32
- cancer death rates, 4, 5, 15, 22
- cancer deaths caused by tobacco, 149
- cancer of the buccal cavity and pharynx, 78-84
- cause-of-death classification problems, 147
- cervical cancer, 137-141
- esophageal cancer, 90-99
- Japanese Study of 29 Health Districts, 30, 31
- kidney cancer, 113-119
- laryngeal cancer, 6, 63-69, 71-73
- lung cancer, 4-6, 18, 21-28, 30-59, 145
- lung cancer among asbestos workers, 189, 190
- lung cancer among uranium miners, 190
- oral cancer, 6, 7, 78-88
- overall cancer mortality and smoking relationship, 142-144, 147
- pancreatic cancer, 122-131
- smoking-related cancers among females, 148
- smoking-related cancers among males, 148
- stomach cancer, 132-136
- Swedish Study, 32
- U.S. Veterans Study, 31

**MOTIVATION**

- health risks of smoking information effect, 260
- interaction with internal vs. external locus of control and smoking cessation treatment, 274-276
- predictors of smoking cessation program outcome, 264, 265, 268

## INDEX

- MULTIPLE RISK FACTOR INTERVENTION TRIAL (MRFIT)**
  - cigarettes smoked/day and cessation success relationship, 282
  - intervention/maintenance program for smoking cessation, 280, 281
- MYCOTOXINS**
  - dietary content effect on carcinogenesis assays in animals, 177
- NAPHTHALENES**
  - cocarcinogen role, 198
- NASAL CANCER**
  - snuff association, 3
- NATIONAL CANCER INSTITUTE (NCI)**
  - criteria and guidelines for carcinogenicity tests, 173
- NATIONAL INTERAGENCY COUNCIL ON SMOKING AND HEALTH**
  - activities of American companies in employee smoking cessation programs, survey, 272, 273
- NEONATES**
  - benzo[a]pyrene activation in foreskin, 188, 219
- Neoplasms** *See* **CANCER**
- NEUROTICISM**
  - smoking cessation and maintenance success relationship, 262
- NICKEL**
  - cigarette tobacco and smoke content and carcinogenic activity, 210, 211
- NICKEL WORKERS**
  - nasal cavity and lung cancers incidence, 211
- NICOTINE**
  - cocarcinogen role, 198, 199
  - pancreatic cancer induction relationship, 219
  - transplacental effects, 189
- NICOTINE CONTENT**
  - bladder cancer risk relationship, 108
  - esophageal cancer risk relationship, 96
  - laryngeal cancer risk relationship, 69
  - lung cancer mortality relationship, 37, 42
  - oral cancer risk relationship, 80, 83
- NICOTINE CONTENT—Contd.**
  - U.S. cigarettes sales-weighted average, 215
- NITROGEN**
  - smoke content, 183
- NITROGEN DIOXIDE**
  - ciliotoxic agent, 193
- NITROGEN OXIDES**
  - content of cigarette smoke, 193
- NITROSAMINES**
  - content in snuff, 201
  - di-methylnitrosamine caused kidney tumors in rats, 119
  - dietary content effect on carcinogenesis assays in animals, 177
  - N-nitrosamines in tobacco and tobacco smoke, 200–206
  - N-nitrosodiethanolamine, 202
  - tobacco-specific N-nitrosamines, 203–207, 220
  - volatile N-nitrosamines, 200–202
- NONSMOKERS**
  - lung cancer mortality among wives of smokers, 243–251
  - lung cancer risks, 9, 250, 251
  - smoke constituents absorption, 240, 241
- NORTH KARELIA (FINLAND) PROJECT**
  - televised smoking cessation clinic effectiveness, 265, 266
- OCCUPATIONAL FACTORS**
  - (*See also* **INDUSTRIAL INHALANTS**)
  - bladder cancer risk, 102
  - cadmium exposure and prostatic cancer, 212
  - lung cancer mortality, 47–49
  - smoking cessation and maintenance programs at the workplace, 10, 272, 273
  - syncarcinogenesis—occupational carcinogens and smoking, 189–191
  - synergistic role with smoking in bladder cancer, 112
- ORAL CANCER**
  - causal significance of association with smoking—coherence, 85–87
  - causal significance of association with smoking—consistency, 80, 85
  - causal significance of association with smoking—specificity, 84, 85

**ORAL CANCER—Contd.**

- causal significance of association with smoking—strength, 80, 83, 85, 86
- causal significance of association with smoking—temporal relationship, 85
- dose-response relationship with smoking, 80, 85, 86, 90, 146
- experimental studies, 89
- geographical factors, 78
- lip cancer and tobacco use relationship, 3
- morbidity and mortality estimates for 1982, 73
- mortality, 6, 7, 78–85
- mortality rates for cancer of the buccal cavity and pharynx, 78–84
- most common histological type, 80
- nicotine as cocarcinogen, 199
- retrospective and prospective studies, 80, 85, 86
- risk among ex-smokers, 87, 90
- risk related to non-cigarette tobacco use, 87–90, 145
- sex factors, 78, 86
- smoking association, 6, 7, 80, 89, 145
- snuff-dipping relationship, 201
- survival rate for cancer of the floor of the mouth, tongue, and pharynx, 80
- synergy of alcohol and smoking, 80, 86, 88, 90, 146, 191, 202

**ORAL CAVITY**

- premalignant oral mucosal changes in smokers vs. nonsmokers, 85

**PAH See POLYNUCLEAR AROMATIC HYDROCARBONS**

**PANCREAS**

- premalignant changes in smokers vs. nonsmokers, 128, 131

**PANCREATIC CANCER**

- causal significance of the association with smoking—coherence, 129–131
- causal significance of the association with smoking—consistency, strength, and specificity, 128
- causal significance of the association with smoking—temporal relationship, 128

**PANCREATIC CANCER—Contd.**

- cigar smoking relationship, 131
- cigarette smoking as contributory factor, 7
- dose-response relationship with smoking, 128–130
- experimental studies, 131, 132
- hypotheses on mechanisms involved in pathogenesis, 199, 200
- incidence in populations with different smoking habits, 129
- morbidity and mortality estimates for 1982, 122
- mortality, 122–131
- most common form, 127
- nicotine's role in induction, 219
- prevalence in men vs. women, 127
- prospective studies of relationship with smoking, 128, 130
- survival rate, 126, 127

**PARAFFIN HYDROCARBONS**

- tumor development inhibition, 198

**PARENTAL SMOKING**

- adolescence smoking initiation and cessation effect, 292, 293
- respiratory illness in children relationship, 239

**Passive smoking See INVOLUNTARY SMOKING**

**PEER GROUPS**

- adolescent peer modeling for smoking prevention programs, 297–300
- adolescent smoking initiation and cessation effects, 293

**PERSONALITY**

- abstinence violation effect, 278, 279
- internal vs. external locus of control, motivation and smoking cessation treatment interactions, 274–276
- self-perception relationship to maintenance of smoking cessation, 283

**PESTICIDES**

- dietary content effect on carcinogenesis assays in animals, 177

**PHYSICIANS**

- smoking cessation direction to patients, effect, 10, 260–262, 268

**PIPE SMOKING**

- bladder cancer relationship, 112
- cancer mortality ratios, 143

## INDEX

### PIPE SMOKING—Contd.

- esophageal cancer relative risk and mortality rate, 7, 99–101, 146
- kidney cancer relationship, 122
- laryngeal cancer relative risk and mortality rate, 6, 74–77, 145
- lung cancer relative risk and mortality rate, 5, 60–62, 63, 145
- oral cancer relative risk and mortality rate, 6, 7, 87–89, 146
- smoke collection and analysis methods, 182
- synergistic role with alcohol for oral cancer risk, 88
- temperature profile, 182

### PIPE TOBACCO

- nickel content, 211

### PNEUMONIA

- incidence in children of smoking parents, 239

### POLONIUM-210

- cigarette tobacco and smoke content and carcinogenic activity, 210
- syncarcinogenic effect with benzo[a]pyrene, 191

### POLYNUCLEAR AROMATIC HYDROCARBONS (PAH)

- alcohol enhancement of carcinogenic effect, 191
- cocarcinogen role, 198
- tumor initiators, 188, 195, 196

### PREVENTION OF SMOKING

- adolescent programs review, 11, 296–300
- lung cancer mortality relationship, 6

### PROSPECTIVE STUDIES

- (See also AMERICAN CANCER SOCIETY 9-STATE STUDY; AMERICAN CANCER SOCIETY 25-STATE STUDY; BRITISH PHYSICIANS STUDY; CALIFORNIA OCCUPATIONS STUDY; CANADIAN VETERANS STUDY; JAPANESE STUDY; SWEDISH STUDY; U.S. VETERANS STUDY)
- bladder cancer mortality ratios, 110, 111
- cervical cancer mortality ratios, 141
- esophageal cancer mortality ratios, 96, 97

### PROSPECTIVE STUDIES—Contd.

- esophageal cancer mortality ratios in cigar and pipe smokers, 99
- kidney cancer mortality ratios and relative risk, 120, 121
- laryngeal cancer mortality ratios, 68, 72
- laryngeal cancer mortality ratios in cigar and pipe smokers, 75
- lung cancer mortality ratios in ex-smokers, 45, 46
- lung cancer mortality ratios in male smokers, 61
- lung cancer mortality ratios, smokers vs. nonsmokers, 35–39
- oral cancer mortality ratios, 85, 86
- oral cancer mortality ratios in cigar and pipe smokers, 88
- overall cancer mortality ratios, 142, 143
- pancreatic cancer mortality ratios, 130
- stomach cancer mortality ratios, 136
- summaries, 30–33

### PROSTATIC CANCER

- occupational exposure to cadmium oxide relationship, 212

### RACE FACTORS

- bladder cancer mortality, 102–107
- bronchus, trachea, and lung cancer mortality, 24–28
- cancer of the buccal cavity plus oral pharynx mortality, 78–84
- cervical cancer mortality, 137, 138
- esophageal cancer mortality, 90–96
- kidney cancer mortality, 113–118
- laryngeal cancer mortality, 63–65
- lung cancer mortality, 21, 23
- pancreatic cancer mortality, 122–127
- stomach cancer mortality, 132–135

### RADIATION

- potential etiologic factor in kidney cancer, 119

### RADON DAUGHTERS

- syncarcinogenic effect with smoking, 190, 191

### RECIDIVISM

- antecedents of relapse, 10, 276–279
- negative moods relationship, 282
- pretreatment cigarettes smoked/day relationship, 282

**REDUCTION OF SMOKING**

buddy system effectiveness, 279

**RELIGIOUS FACTORS**

cancer risks among Mormons vs. non-Mormons in urban vs. rural areas, 45, 46  
lung cancer mortality among Mormons and Seventh Day Adventists, 48, 50

**RENAL CANCERS**

cigarette smoking—relative risk, 119

**RESPIRATORY TRACT DISEASES**

incidence in children of smoking parents, 239

**RESPIRATORY TRACT EPITHELIUM**

abnormalities in smokers vs. nonsmokers, 99

**RODENTS**

(*See also* **SYRIAN GOLDEN HAMSTERS**)

carcinogenic activity of N-nitrosomorpholine, 201  
carcinoma induction by nitrosodiethanolamine, 202  
induction of laryngeal tumors, 77  
inhalation studies, 185, 186  
metabolism of nitrosamines, 205, 206  
responsiveness to different routes of administration of carcinogens, 174, 175  
tumorigenic activity of sidestream smoke condensate in mouse skin assays, 241

**SEVENTH DAY ADVENTISTS**

laryngeal cancer rates, 65, 72  
lung cancer mortality, 48, 50

**SEX FACTORS**

age-specific lung cancer mortality and smoking patterns, males vs. females, 50–57  
bladder cancer and smoking habits relationship, 108, 112  
bladder cancer incidence, 101  
bronchus, trachea, and lung cancers mortality, 24, 27, 28  
cancer mortality estimates for 1982, 15  
cancer mortality trends, 22  
cancer of the buccal cavity plus oral pharynx mortality, 78–84

**SEX FACTORS—Contd.**

dose-response relationship between pancreatic cancer and smoking, 128  
esophageal cancer mortality, 90–96  
kidney cancer and smoking habits relationship, 120, 121  
kidney cancer mortality, 113–118  
laryngeal cancer morbidity and mortality, 63–65, 69–71  
laryngeal cancer, smoking habits and alcohol consumption relationship, 72  
lung cancer mortality, 4, 6, 21, 23, 36, 63, 145  
lung cancer mortality vs. smoking habit differences, 42–45  
lung cancer risk relationship to cigarettes smoked/day and use of filter—males vs. females, 40, 41  
mortality among male smokers vs. nonsmokers, 142–144, 147  
mortality for smoking-related cancers, 148  
oral cancers incidence, 78, 86  
pancreatic cancer—male to female ratio, 127, 131  
pancreatic cancer mortality, 122–127, 130  
responsiveness of animals to known carcinogens, 176  
spontaneous smoking cessation by adolescents, 291  
stomach cancer mortality, 132–135

**SIBLINGS**

adolescence smoking initiation and cessation effect, 292, 293

**SKIN CANCER**

arsenic exposure association, 212

**SMOKE INHALATION, ANIMALS**

studies and species suitability, 184–186, 220  
tumorigenic potential of whole smoke, 8

**SMOKE STREAMS**

collection and analysis methods, 181, 182  
description, 9, 181, 213  
mainstream smoke content, 183  
sidestream/mainstream ratio for major toxic and tumorigenic agents, 213, 214

## INDEX

### SMOKE STREAMS—Contd.

- sidestream/mainstream ratio of cigarette smoke constituents, 240, 251
- sidestream smoke—chemical constituents, 239–241

### Smoking See CIGAR SMOKING; MATERNAL SMOKING; PARENTAL SMOKING; PIPE SMOKING

### SMOKING PATTERNS

- age-specific lung cancer mortality, 50–55, 58
- bladder cancer mortality association in males and females, 112
- bladder cancer prevalence in different populations, 112
- cessation and maintenance success relationship, 262
- cigarettes smoked/day and cessation probability in adolescents, 294–296
- cigarettes smoked/day and cessation success relationship, 282
- consumption vs. lung cancer death rate, 40, 41, 43, 44, 62
- dose-response relationship of lung cancer mortality in nonsmoking wives of smokers, 243–251
- dose-response relationship with bladder cancer, 107, 108, 111, 112
- dose-response relationship with cervical cancer, 140, 141
- dose-response relationship with esophageal cancer, 7, 96–98, 101, 146
- dose-response relationship with kidney cancer, 119, 121
- dose-response relationship with laryngeal cancer, 6, 69–72, 145
- dose-response relationship with lung cancer, 5, 36–41, 62, 145
- dose-response relationship with oral cancers, 7, 80, 83, 85, 86, 146
- dose-response relationship with overall cancer mortality, 142–144, 147
- dose-response relationship with pancreatic cancer, 128–130
- dose-response relationship with stomach cancer, 137
- duration of smoking and probability of quitting, 293, 294, 300

### SMOKING PATTERNS—Contd.

- esophageal cancer mortality among different populations, 98
- histories of those who quit vs. those who did not, 267
- kidney cancer prevalence in different populations, 121
- laryngeal cancer mortality among different populations, 72
- lower tar and nicotine cigarettes, 9, 216, 217
- lung cancer mortality among different populations, 48, 50
- lung cancer mortality relationship in males vs. females, 42–45
- lung cancer subjects—retrospective studies, 34, 35
- oral cancer mortality among different populations, 86
- pancreatic cancer incidence among different populations, 129
- pre-malignant changes in bronchial epithelium correlation, 55, 58–60
- regularity and cessation probability in adolescents, 294–296
- tobacco-specific N-nitrosamines retention relationship, 204

### SNUFF

- cancer association, 3, 9
- nickel content, 211
- nitrosamines content, 201
- nitrosodiethanolamine content, 202
- tobacco-specific N-nitrosamines, 203, 204

### SNUFF-DIPPING

- lung cancer risk, 60
- nicotine as cocarcinogen in oral cancer, 199
- oral cancer relationship, 201
- oral cancer risk, 7, 87, 88, 90, 146
- tobacco-specific N-nitrosamines in saliva, 204

### SOCIAL FACTORS

- social pressure and smoking cessation relapse relationship, 276–279
- social support and smoking cessation maintenance, 279–281, 285

### STANFORD HEART DISEASE PREVENTION PROGRAM

- mass media encouragement of smoking cessation, 265

### STOMACH CANCER

- cigarette smoking association, 8

**STOMACH CANCER—Contd.**

- dose-response relationship with smoking, 137
- morbidity and mortality estimates for 1982, 132
- mortality, 132-135
- nonsmoking wives of smokers, risk, 246
- prospective studies of relationship with smoking, 136, 137
- retrospective studies of relationship with smoking, 132, 136, 137

**STRESS**

- antecedents of smoking cessation relapse, 277, 278

**SWEDISH STUDY**

- bladder cancer mortality ratio, 110, 111
- cervical cancer mortality ratio, 141
- esophageal cancer mortality ratio, 96
- lung cancer mortality ratio, smokers vs. nonsmokers, 36, 38, 39
- oral cancer mortality ratio, 85
- pancreatic cancer mortality ratio, 130
- stomach cancer mortality ratio, 136
- summary, 32, 33

**SWEDISH TWIN REGISTRY**

- genetic predisposition toward smoking and lung cancer, study, 34, 35

**SYRIAN GOLDEN HAMSTERS**

- inhalation studies suitability, 185, 186, 220
- laryngeal cancer research suitability, 75, 77
- respiratory tract tumor induction by N-nitrosodiethylamine, 200, 201
- syncarcinogenic effects of polonium-210 and benzo[a]pyrene, 191
- transplacental migration of tobacco tar, 188, 189

**TAR CONTENT**

- bladder cancer risk relationship, 108
- cigars vs. pipes vs. cigarettes, carcinogenic activity, 62
- esophageal cancer risk relationship, 96
- laryngeal cancer risk relationship, 69, 78, 146

**TAR CONTENT—Contd.**

- lung cancer mortality relationship, 37, 42, 63, 145
- oral cancer risk relationship, 80, 83
- U.S. cigarettes sales-weighted average, 215

**TARS, TOBACCO**

- transplacental migration, 188, 189
- tumor induction in skin of animals, 187, 188

**Television See MASS MEDIA**

**THIRD NATIONAL CANCER SURVEY (TNCS)**

- bladder cancer and cigarette smoking relationship, 108
- cervical cancer and smoking relationship, 140
- chewing tobacco and snuff use and risk for cancers of the gum and mouth, 88
- laryngeal cancer and smoking association, 65
- lung cancer and smoking association, 34
- oral cancer and tobacco use association, 80
- pancreatic cancer and smoking relationship, 128
- renal cancer and cigarette smoking association, 119
- stomach cancer and smoking association, 132

**TNCS See THIRD NATIONAL CANCER SURVEY**

**TOBACCO**

(See also PIPE TOBACCO; SNUFF)

- arsenic content, 211, 212
- flavor enhancers, 217-219
- nitrosation of nicotine during curing, 203

**TOBACCO CHEWING**

- lung cancer risk, 60
- nicotine as cocarcinogen in oral cancer, 199
- oral cancer risk, 87, 88

**TOBACCO SMOKE**

(See also CIGAR SMOKE; CIGARETTE SMOKE; GAS PHASE COMPONENTS OF SMOKE)

- assays with smoke particles, 187, 188, 220



## INDEX

### TOBACCO SMOKE—Contd.

- carbon monoxide content, 192, 193
- cocarcinogen identification need, 219
- fractionation experiments, 188, 220
- N-nitrosamines, 200–206
- nickel content, 211
- nitrosodiethanolamine content in maleic hydrazide treated tobacco, 202
- process for determining chemical and physical nature, 181–184
- synergistic effects with alcohol relative to cancer risks, 191, 192
- transplacental carcinogenesis, 188, 189, 219–221
- tumor initiating agents in the particulate phase, 195, 196
- tumor promoters, 197
- vapor phase components, 192–194

### TRACHEAL CANCER

- mortality, 24–28, 56, 57

### TUMORS

- initiating agents in tobacco smoke, 195, 196
- polonium-210 effects, 210
- promoters in tobacco smoke, 197
- tumorigenic constituents of smoke particulates, 188
- tumorigenic potential of smoke particulates, 187, 188

### TWINS

- Swedish Twin Registry Study, 34, 35

### UNITED STATES

- lung cancer mortality for nonsmoking wives of smokers, 248–250

### URANIUM MINERS

- lung cancer mortality, smokers vs. nonsmokers, 190

### URETHANE

- carcinogenicity, 194

### U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

- 1982 Report organization, 3

### U.S. NATIONAL ACADEMY OF SCIENCES

- inorganic arsenic compounds and skin and lung cancer, 212

### U.S. VETERANS STUDY

- bladder cancer mortality ratio, 110, 111

### U.S. VETERANS STUDY—Contd.

- esophageal cancer mortality ratio, 96, 97
- esophageal cancer mortality ratio for ex-smokers, 97
- esophageal cancer mortality ratio in cigar and pipe smokers, 99
- kidney cancer mortality among ex-smokers, 119
- kidney cancer mortality ratio and relative risk, 120, 121
- laryngeal cancer mortality ratio, 68, 72
- laryngeal cancer mortality ratio in cigar and pipe smokers, 75
- laryngeal cancer, relative risk, 69
- laryngeal cancer risk among ex-smokers, 72, 73
- lung cancer mortality by amount smoked, 38, 55, 58
- lung cancer mortality ratio in ex-smokers, 46
- lung cancer mortality ratio in male smokers, 61
- lung cancer mortality ratio, smokers vs. nonsmokers, 36, 38, 39
- mortality for smoking-related cancers among males, 148
- oral cancer mortality ratio, 85, 86
- oral cancer mortality ratio in cigar and pipe smokers, 88
- oral cancer risks in ex-smokers, 87
- overall cancer mortality ratio, 142, 143
- pancreatic cancer and cigar smoking relationship, 131
- pancreatic cancer mortality ratio, 130
- pipe smoking and bladder cancer mortality, 112
- pipe smoking and kidney cancer association, 122
- stomach cancer mortality ratio, 136
- summary, 31, 33

### UTAH

- cancer risk among rural vs. urban Mormons vs. non-Mormons, 45, 46

## INDEX

- Uterine cervix cancer** *See* **CERVICAL CANCER**
- VETERANS ADMINISTRATION LUNG CANCER CHEMOTHERAPY STUDY GROUP (VALG)**  
lung cancer classifications, 29
- VINYL CHLORIDE**  
carcinogenicity, 194
- VITAMIN A**  
deficiency relationship to increased carcinogen susceptibility, 192  
lung cancer risk relationship, 218
- VITAMIN B<sub>2</sub>**  
deficiency relationship to carcinogens effects, 192
- WEST GERMANY**  
behavioral treatment manual effectiveness in smoking cessation, 258
- WHO** *See* **WORLD HEALTH ORGANIZATION**
- WITHDRAWAL SYMPTOMS**  
relapse relationship, 277
- WOMEN**  
bronchus, trachea, and lung cancer mortality, 28  
cancer mortality estimates for 1982, 15  
cervical cancer mortality, 137
- WOMEN—Contd.**  
esophageal cancer and smoking, 96  
lower tar and nicotine cigarettes and esophageal cancer risk, 96  
lung cancer mortality among nonsmoking wives of smokers, 243–251  
lung cancer mortality trends, 1950–1977, 21–23  
mortality for smoking-related cancers, 148  
overall cancer mortality rates, smokers vs. nonsmokers, 5, 143, 144, 147
- WORKING PARTY FOR THERAPY OF LUNG CANCER (WP-L)**  
lung cancer classifications, 29
- WORLD HEALTH ORGANIZATION (WHO)**  
cause-of-death classification regulation, 147  
criteria and guidelines for carcinogenicity tests, 173  
lung cancer classifications, 29
- WP-L** *See* **WORKING PARTY FOR THERAPY OF LUNG CANCER**
- ZINC**  
deficiency in diet relationship to esophageal carcinogen susceptibility, 192